

Gleim Commercial Pilot Syllabus

Sixth Edition, First Printing

Updates

December 2018

NOTE: Text that should be deleted is displayed with a line through it. New text is shown with a blue background.

If you are tested on any content not represented in our materials or this update, please share this information with Gleim so we can continue to provide the most complete test preparation experience possible. You can submit feedback at www.GleimAviation.com/questions. Thank you in advance for your help!

The changes in this update reflect current FAA literature and procedures. The regulations in 14 CFR 61.129(a)(3)(ii) now allow for a technically advanced airplane (TAA) to be used in lieu of, or in combination with, training in a complex or turbine-powered airplane.

Part I – Commercial Pilot Training Syllabus Airplane Single-Engine Land

Page 13, Flight Training Syllabus: This paragraph was previously edited in an April 2018 update.

Equipment requirements and limitations. Use of a complex or technically advanced airplane. Applicants must achieve 10 hr. of complex and/or technically advanced airplane experience during flight training for a commercial pilot certificate. However, the airplane used for the commercial ASEL practical test does not need to be complex or technically advanced. The practical test may be accomplished in any airplane that is capable of accomplishing all areas of operation required for the practical test. A complex airplane is defined as an airplane that has retractable landing gear, flaps, and a controllable pitch propeller (including airplanes where the propeller pitch is digitally controlled, such as a full-authority digital engine control–FADEC). ~~Although complex airplane experience must be achieved during flight training, the aircraft used for the commercial pilot airplane single engine land (ASEL) practical test must meet the requirements of 14 CFR 61.45. A complex airplane is not required for the ASEL practical test.~~ A technically advanced airplane (TAA) is defined as an airplane with an electronically advanced avionics system, including an electronic primary flight display (PFD), an electronic multi-function display (MFD), and a two-axis autopilot. The 10 hr. of required training may be accomplished in any combination of complex airplane, TAA, or turbine-powered airplane. A complex airplane must be used for an AMEL practical test, as defined in 14 CFR 61.1.

Pages 14-16, Commercial Pilot Syllabus Lesson Sequence and Times, Stage One-Three tables: The titles of the following columns and rows in these tables were edited to include reference to TAAs.

Complex Airplane /TAA Dual

Flight 5 Intro to Complex or Technically Advanced Airplanes

Flight 6 Complex/TAA--Slow Flight/Stalls

Flight 7 Complex/TAA--Emergency Ops

Flight 8 Complex/TAA--Night Operations

Flight 15 Complex/TAA--Maneuvers Review

Flight 35 Complex/TAA--Perf. Maneuvers

Flight 36 Complex/TAA--Eights-on-Pylons

Flight 43 Complex/TAA--Maneuvers Review

Flight 51 Complex/TAA--Maneuvers Review

Page 16, Commercial Pilot Syllabus Lesson Sequence and Times, Stage Three table:

| LESSON | Page | Flight | | | | | | | | Ground |
|----------------------------------|------|----------------------|----------------------|--------------------|--------------------|-------------|------------|------------|----------------------------|---------------------------------|
| | | Flight Training Dual | Flight Training Solo | Dual Cross-Country | Solo Cross-Country | Instrument | Night Dual | Night Solo | Complex Airplane /TAA Dual | Aeronautical Knowledge Training |
| Flight 58 Maneuvers Review | 96 | 1.0 | | | | | | | 1.0 | |
| Flight 59 Stage Three Check | 97 | 1.5 | | | | | | | 1.5 | |
| Flight 60 End-of-Course Check | 98 | 2.0 | | | | | | | 2.0 | |
| STAGE THREE TOTALS | | 23.5 | 16.5 | 3.0 | 0.0 | 3.0 | 0.0 | 0.0 | 40.5 6.0 | 0.0 |
| COURSE TOTALS | | 55.0 | 65.0 | 10.0** | 38.0** | 10.0 | 6.0 | 6.0 | 19.0 14.5 | 35.0 |

[. . .]

NOTE: Any flight lesson in this training syllabus may be conducted in a complex airplane or technically advanced airplane (TAA) at the discretion of the flight instructor and/or chief flight instructor, as appropriate. We have indicated the minimum number of lessons that must be completed in a complex airplane or TAA. This syllabus does not require solo operations in a complex airplane or TAA, but solo lessons may also be conducted in a complex airplane or TAA at the discretion of the flight instructor and/or chief flight instructor, as appropriate.

Part I: Commercial Pilot Flight Training Syllabus Airplane Single-Engine Land

Page 36, Stage One:

Stage One Objective

The pilot will obtain the knowledge and skill required to safely operate a complex or technically advanced airplane and receive a complex airplane logbook endorsement (if applicable). Additionally, the pilot will be introduced to commercial flight maneuvers.

Stage One Completion Standards

The stage will be completed when the pilot demonstrates proficiency in the operation of a complex or technically advanced airplane, receives a complex airplane logbook endorsement (if applicable), and satisfactorily passes the Stage One check.

| Lesson | Topic |
|---------|--|
| [. . .] | |
| 5 | Introduction to Complex Airplanes or Technically Advanced Airplanes (TAAs) |
| 6 | Complex or Technically Advanced Airplane--Slow Flight and Stalls |
| 7 | Complex or Technically Advanced Airplane--Emergency Operations |
| 8 | Complex or Technically Advanced Airplane--Night Operations |
| [. . .] | |
| 15 | Complex or Technically Advanced Airplane--Maneuvers Review |
| [. . .] | |
| 17 | Stage One Check--Complex or Technically Advanced Airplane |

Page 41, Flight Lesson 5:

FLIGHT LESSON 5: INTRODUCTION TO COMPLEX AIRPLANES OR TECHNICALLY ADVANCED AIRPLANES (TAAs)

Objective

To familiarize the pilot with the complex airplane or the technically advanced airplane (TAA), its operating characteristics, the flight deck controls, and the instruments and systems. The pilot will be introduced to preflight and postflight procedures, the use of checklists, and the safety precautions to be followed.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot displays an understanding of the airplane's systems, preflight procedures, and postflight procedures. The pilot will be able to demonstrate at least a private pilot skill level during the flight operations. Additionally, the pilot will display an understanding of supplemental oxygen requirements and pressurization systems and controls even if these items are not applicable to the complex airplane or TAA being flown.

Page 42, Flight Lesson 6:

FLIGHT LESSON 6: COMPLEX OR TECHNICALLY ADVANCED AIRPLANE--SLOW FLIGHT AND STALLS

Objective

To improve the pilot's proficiency in the operation of a complex airplane or TAA and to introduce slow flight, stalls, short-field takeoffs and landings, and power-off 180° accuracy approaches and landings.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot displays an increased proficiency in the operation of a complex airplane **or TAA**. During this and subsequent flights, the pilot will perform the preflight inspection, engine starting, taxiing, the before-takeoff check, and the postflight procedures without instructor assistance. The pilot will be able to demonstrate an understanding of short-field takeoffs and landings, power-off accuracy approaches and landings, slow flight, and stalls (including the proper recovery procedures).

Page 43, Flight Lesson 7:

FLIGHT LESSON 7: COMPLEX **OR TECHNICALLY ADVANCED** AIRPLANE--EMERGENCY OPERATIONS

Objective

To improve the pilot's proficiency in the operation of a complex airplane **or TAA** and to introduce emergency operations and soft-field takeoffs and landings.

Page 44, Flight Lesson 8:

FLIGHT LESSON 8: COMPLEX **OR TECHNICALLY ADVANCED** AIRPLANE--NIGHT OPERATIONS

Objective

To introduce the pilot to night-flying preparation and night-flying operations to the commercial pilot skill level. Additionally, the pilot will demonstrate the necessary skills and proficiency to act as pilot in command of a complex airplane **or TAA**.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates proficiency in the operation of a complex airplane **or TAA** as pilot in command. The pilot will be able to maintain the desired altitude, ± 100 ft.; airspeed, ± 10 kt.; and heading, $\pm 10^\circ$.

Page 51, Flight Lesson 15:

FLIGHT LESSON 15: COMPLEX **OR TECHNICALLY ADVANCED** AIRPLANE--MANEUVERS REVIEW

Objective

To review procedures and maneuvers covered previously in a complex airplane **or TAA**.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an increase in proficiency in each maneuver while operating a complex airplane **or TAA**. While maneuvering during slow flight, the pilot will be able to maintain the desired airspeed, $+5/-0$ kt.; specified altitude, ± 100 ft.; heading, $\pm 10^\circ$; specified bank angle, $\pm 10^\circ$, during turning flight; and roll out on the specified heading, $\pm 10^\circ$.

Page 53, Flight Lesson 17:

FLIGHT LESSON 17: STAGE ONE CHECK--COMPLEX OR TECHNICALLY ADVANCED AIRPLANE

Objective

During this stage check, an authorized flight instructor will evaluate the pilot's proficiency in a complex airplane or TAA.

[. . .]

Completion Standards

The lesson and Stage One will have been successfully completed when the pilot can demonstrate proficiency in the operation and systems of the complex airplane or TAA and receive a complex airplane logbook endorsement (if applicable). While maneuvering during slow flight, the pilot will be able to maintain the desired airspeed, $\pm 5/-0$ kt. While performing all maneuvers, the pilot will be able to maintain the specified altitude, ± 100 ft.; heading, $\pm 10^\circ$; specified bank angle, $\pm 10^\circ$, during turning flight; and roll out on the specified heading, $\pm 10^\circ$.

Page 72, Stage Three, lesson titles:

| Lesson | Topic |
|---------|---|
| 35 | Complex or Technically Advanced Airplane--Performance Maneuvers |
| 36 | Complex or Technically Advanced Airplane--Eights-on-Pylons |
| [. . .] | |
| 43 | Complex or Technically Advanced Airplane--Maneuvers Review |
| [. . .] | |
| 51 | Complex or Technically Advanced Airplane--Maneuvers Review |

Page 73, Flight Lesson 35:

FLIGHT LESSON 35: COMPLEX OR TECHNICALLY ADVANCED AIRPLANE--PERFORMANCE MANEUVERS

Objective

To review procedures and maneuvers covered previously. Additionally, the pilot will be introduced to performance maneuvers in a complex airplane or TAA.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an understanding of performing steep turns, steep spirals, chandelles, and lazy eights in the complex airplane or TAA. The pilot will be able to maintain V_Y , ± 5 kt. during the takeoff climb and maintain the recommended approach airspeed (with gust factors applied), ± 5 kt.

Page 74, Flight Lesson 36:

FLIGHT LESSON 36: COMPLEX OR TECHNICALLY ADVANCED AIRPLANE--EIGHTS-ON-PYLONS

Objective

To review procedures and maneuvers covered previously. Additionally, the pilot will be introduced to eights-on-pylons and basic attitude instrument flight in a complex airplane or TAA.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an understanding of performing eights-on-pylons in the complex airplane or TAA. Additionally, the pilot's proficiency in chandelles and lazy eights will increase. The pilot will be able to maintain V_x , +10/-0 kt. until clearing the obstacles during the short-field takeoff, then maintain V_y , ± 5 kt. During the short-field and power-off accuracy approaches and landings, the pilot will be able to maintain the recommended approach airspeed (with gust factors applied), ± 5 kt., and touch down at or within 200 ft. beyond a specific point.

Page 81, Flight Lesson 43:

FLIGHT LESSON 43: COMPLEX OR TECHNICALLY ADVANCED AIRPLANE--MANEUVERS REVIEW

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an increased knowledge of the complex airplane or TAA systems and flight characteristics. Additionally, the pilot will demonstrate a good understanding of the correct procedures in all of the listed tasks. The pilot will be able to maintain the desired altitude, ± 100 ft.; airspeed, ± 10 kt.; and heading, $\pm 10^\circ$. During takeoffs and landings, the pilot will be able to maintain V_y , ± 5 kt.; V_x , +5/-0 kt.; and the recommended approach airspeed (with gust factors applied), ± 5 kt.

Page 89, Flight Lesson 51:

FLIGHT LESSON 51: COMPLEX OR TECHNICALLY ADVANCED AIRPLANE--MANEUVERS REVIEW

Page 96, Flight Lesson 58: The objective of this lesson was previously edited in an April 2018 update.

Objective

To review procedures and maneuvers covered previously. NOTE: This lesson may be completed using a combination of a complex and/or a noncomplex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 97, Flight Lesson 59: The objective of this lesson was previously edited in an April 2018 update.

Objective

During this stage check, an authorized instructor will determine if the pilot is proficient in the commercial pilot flight maneuvers. NOTE: This lesson may be completed using a combination of a complex ~~and/or a noncomplex~~ airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 98, Flight Lesson 60: The objective of this lesson was previously edited in an April 2018 update.

Objective

The pilot will be able to demonstrate the required proficiency of a commercial pilot by utilizing the current FAA Commercial Pilot Airman Certification Standards. NOTE: This lesson may be completed using a combination of a complex ~~and/or a noncomplex~~ airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Appendix C—Fast-Track Commercial Pilot Training Syllabus

Page 155, Training Course Objectives:

- 3. You do NOT have a complex airplane logbook endorsement ~~or experience in a technically advanced airplane (TAA)~~.
 - a. If you have a complex airplane logbook endorsement ~~or experience in a TAA~~, one or more of the first four flight lessons will not be needed.
 - b. Note that 10 hr. of flight training (dual) is required in a complex airplane ~~or TAA~~.

[. . .]

- 5. Flight lessons 1 through 4 are designed to provide you with the minimum training for a complex airplane logbook endorsement to act as PIC ~~or to act as PIC in a TAA~~.
 - a. If you are instrument rated, we recommend that you seek the service of a CFII and obtain instrument flight transition training in that complex airplane ~~or TAA~~.
- 6. Flight lessons 5 and 6 are provided to meet the commercial aeronautical experience requirements for cross-country flight training and to accumulate the 10 hr. of complex airplane ~~or TAA~~ training.
 - a. Cross-country flight training in a complex airplane ~~or TAA~~ is essential in your transition training program.
- 7. You must decide whether you will use a complex airplane, ~~a TAA, or a primary training airplane~~ for your entire practical test ~~or use two airplanes: a complex airplane for tasks requiring such an airplane and a primary trainer airplane for the remaining tasks.~~

Page 156, flight training lesson titles:

| Lesson | Topic |
|---------|---|
| 1 | Introduction to Complex Airplanes or Technically Advanced Airplanes (TAAs) |
| [. . .] | |
| 4 | Complex or Technically Advanced Airplane Review |
| [. . .] | |

Page 158, Flight Lesson 1:

**FLIGHT LESSON 1: INTRODUCTION TO COMPLEX AIRPLANES OR TECHNICALLY
ADVANCED AIRPLANES (TAAs)**

Objective

To familiarize the pilot with the complex airplane or the technically advanced airplane (TAA), its operating characteristics, the cockpit flight deck controls, and the instruments and systems. The pilot will be introduced to preflight and postflight procedures, the use of checklists, and the safety precautions to be followed.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot displays an understanding of the airplane's systems, preflight procedures, and postflight procedures. The pilot will be able to demonstrate at least a private pilot skill level during the flight operations. Additionally, the pilot will display an understanding of supplemental oxygen requirements and pressurization systems and controls even if these items are not applicable to the complex airplane or TAA being flown.

Page 159, Flight Lesson 2:

Objective

To improve the pilot's proficiency in the operation of a complex airplane or TAA and to introduce slow flight, stalls, short-field takeoffs and landings, and power-off 180° accuracy approaches and landings.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot displays an increased proficiency in the operation of a complex airplane or TAA. During this and subsequent flights, the pilot will perform the preflight inspection, engine starting, taxiing, the before-takeoff check, and the postflight procedures without instructor assistance. The pilot will be able to demonstrate an understanding of the short-field takeoffs and landings, power-off accuracy approaches and landings, slow flight, and stalls (including the proper recovery procedures).

Page 160, Flight Lesson 3:

Objective

To improve the pilot's proficiency in the operation of a complex airplane or TAA and to introduce emergency operations and soft-field takeoffs and landings.

Page 161, Flight Lesson 4:

FLIGHT LESSON 4: COMPLEX OR TECHNICALLY ADVANCED AIRPLANE REVIEW

Objective

To review procedures and maneuvers covered previously in a complex airplane or TAA.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an increase in proficiency in each maneuver while operating a complex airplane or TAA. While maneuvering during slow flight, the pilot will be able to maintain the desired airspeed, +5/-0 kt.; specified altitude, ± 100 ft.; heading, $\pm 10^\circ$; specified bank angle, $\pm 10^\circ$, during turning flight; and roll out on the specified heading, $\pm 10^\circ$.

Page 162, Flight Lesson 5:

Objective

To introduce the pilot to planning and executing a daytime cross-country flight to the commercial pilot skill level. This flight must be at least 2 hours in duration, a total straight-line distance of more than 100 NM from the original point of departure, and occur in daytime conditions. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 163, Flight Lesson 6:

Objective

To introduce the pilot to planning and executing a nighttime cross-country flight to the commercial pilot skill level. This flight must be at least 2 hours in duration, a total straight-line distance of more than 100 NM from the original point of departure, and occur in nighttime conditions. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 164, Flight Lesson 7:

Objective

To increase the pilot's proficiency in cross-country flights. In accordance with Part 61, this flight must be at least 300 NM total distance. For both Part 61 and Part 141 training, the flight must include landings at a minimum of three points and one segment of the flight consisting of a straight-line distance of at least 250 NM. In Hawaii, one segment must have a straight-line distance of 150 NM. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 165, Flight Lesson 8:

Objective

To review procedures and maneuvers covered previously. Additionally, the pilot will be introduced to performance maneuvers in a complex airplane. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an understanding of performing steep turns, chandelles, and lazy eights in the complex airplane. The pilot will be able to maintain V_Y , ± 5 kt. during the takeoff climb and maintain the recommended approach airspeed (with gust factors applied), ± 5 kt.

Page 166, Flight Lesson 9:

Objective

To review procedures and maneuvers covered previously. Additionally, the pilot will be introduced to eights-on-pylons, steep spirals, and basic attitude instrument flight in a complex airplane.

NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an understanding of performing eights-on-pylons and steep spirals in the complex airplane. Additionally, the pilot's proficiency in chandelles and lazy eights will increase. The pilot will be able to maintain V_x , +10/- kt., until clearing the obstacles during the short-field takeoff, then maintain V_y , ± 5 kt. During the short-field and power-off accuracy approaches and landings, the pilot will be able to maintain the recommended approach airspeed (with gust factors applied), ± 5 kt., and touch down at or within 200 ft. beyond a specific point.

Page 167, Flight Lesson 10:

Objective

To further develop the pilot's proficiency through solo practice of assigned maneuvers. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 168, Flight Lesson 11:

Objective

To review procedures and maneuvers covered previously. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 169, Flight Lesson 12:

Objective

To review procedures and maneuvers covered previously. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 170, Flight Lesson 13:

Objective

To increase the pilot's proficiency in each of the assigned maneuvers. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 171, Flight Lesson 14:

Objective

To review procedures and maneuvers covered previously and to identify areas where additional practice is necessary. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

[. . .]

Completion Standards

The lesson will have been successfully completed when the pilot demonstrates an increased knowledge of the complex airplane systems and flight characteristics. Additionally, the pilot will demonstrate a good understanding of the correct procedures in all of the listed tasks. The pilot will be able to maintain the desired altitude, ± 100 ft.; airspeed, ± 10 kt.; and heading, $\pm 10^\circ$. During takeoffs and landings, the pilot will be able to maintain V_Y , ± 5 kt.; V_X , $+5/-0$ kt.; and the recommended approach airspeed (with gust factors applied), ± 5 kt.

Page 172, Flight Lesson 15:

Objective

To increase the pilot's proficiency in each of the assigned maneuvers. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 173, Flight Lesson 16:

Objective

To review procedures and maneuvers covered previously. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 174, Flight Lesson 17:

Objective

To increase the pilot's proficiency and confidence in the commercial flight maneuvers. NOTE: This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.

Page 175, Flight Lesson 18:

Objective

The pilot will be able to demonstrate the required proficiency of a commercial pilot by utilizing the current FAA Commercial Pilot Airman Certification Standards. NOTE: If a noncomplex and a complex airplane are used, a complex airplane must be used for all takeoffs, landings, and emergency procedures. This lesson may be completed using a combination of a complex airplane, TAA, and/or primary training airplane at the discretion of the evaluating instructor.